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ABSTRACT

The principal concept of the Curriculum of Attainments (COA) is that college degrees are awarded on the basis of demonstrated competencies without regard to the amount of time required to attain them. The method of curriculum reform advocated in the COA project is the establishment and expansion of small pilot programs within existing departmental structures. Through the continuing development of exportable self-instructional materials, an open university may be attained that may significantly reduce the time required for on-campus residence required for the degree. This document discusses issues related to the COA program. Included are: (1) instituting competency-based degree programs in a large public university; (2) reasons for the curriculum of attainments; (3) COA program planning and implementation at the departmental level: a matter of committment and contribution; (4) competencies and their assessment; (5) thoughts on mentoring with tongue-in-cheek; (6) instituting competency-based degree programs in a large public university; (7) COA evaluation activities, 1974-1975. Appendixes include COA student learning profile, learning package evaluation questionnaire, mentor activity chart, attainment-based transcript, and brochure. (Author/KE)

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CURRICULUM OF ATTAINMENTS

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Center for Educational Design
Florida State University
Tallahassee, Florida 32306

ERIC

Instituting Competency-Based Degree Programs

in a

Large Public University

A Symposium presented at the
1975 AERA Annual Meeting
March 31, 1975

Participants (In order of presentation)

Dr. Gary E. Peterson	Symposium Organizer and Project Coordinator, Curriculum of Attainments, Florida State University
Dr. John Harris	Associate Director, National Commission on United Methodist Higher Education
Dr. Richard Rubino	Department Chairman and Mentor, Urban and Regional Planning Florida State University
Ms. Pauline Haynes	Mentor, School of Nursing, Florida State University
Dr. David Riesman	Discussant and Professor of Sociology, Harvard University

Acknowledgements

Credits must first be extended to Dr. John Harris, formerly Director of the Division of Instructional Research and Service at Florida State University, for conceiving the notion that attainment-based instruction could be introduced successfuly in mass higher education. His article "Baccalaureate Requirements: Attainments or Exposures' appearing in the Winter 1972 edition of the Educational Record set the conceptual framework for FSU's Curriculum of Attainment project.

Special acknowledgement is extended to Dr. David Riesman who reviewed the papers and made significant editorial comments to enhance their readability and succinctness. I am truly honored that he participated in the symposium.

My gratitude is extended to Ms. Pauline Haynes, mentor in Nursing, and Mr. Dick Rubino, mentor in Urban and Regional Planning for their dedication to the project and their willingness to participate in the symposium. They are the individuals who operate at the front lines in developing and in implementing attainment-based education. Instituting such programs requires inexhaustible resources of courage, energy and persistence in addition to a "thick skin" to maintain balance and perspective in light of pressures by peers who are skeptical and by students who are challenging and demanding.

I wish to thank Ms. Constance Bergquist and Mr. David Fisher, graduate students, who helped design and implement the evaluation strategy for the project. The formative evaluation instruments were created and developed by Ms. Bergquist. I also wish to salute my colleagues in the Center for Educational Design: Dr. William Broderick, Dr. John Merrill, Dr. Al Oosterhoff, Dr. Robert Stakenas, and Dr. Nelson Toole for their indispensable contributions in lending their time and expertise to enhance the development of the project.

Dr. Gary M. Peterson
Project Coordinator
Curriculum of Attainments

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in a

Large Public University

Introduction

The principal concept of the COA is that college degrees are awarded on the basis of demonstrated competencies without regard to the amount of time required to attain them.

This Fall Quarter, 1974, three attainment-based degree programs were implemented at FSU: upper division level (junior and senior years of the baccalaureate) programs in Biology, Nursing and a two-year masters degree program in Urban and Regional Planning. Each program included a faculty mentor, 15-40 students, and juries consisting of at least two faculty members and one practicing professional. The juries assess and certify the achievement of attainments while the mentor assists students in acquiring tutorial assistance and in utilizing individualized learning packages to achieve prescribed proficiency levels. During the present 1974-75 academic year, five Second-Stage departments have begun to observe and plan their own COA programs. These departments include: Baccalaureate programs in Psychology, Music, Theatre, and Religion and a masters degree program in Recreation and Leisure Studies. A more complete description of the program is presented for your information on the accompanying brochures.

STRATEGY FOR CURRICULUM REFORM.

The method of curriculum reform advocated in the COA project is the establishment and expansion of small pilot programs within existing departmental structures. Ultimately, it is envisioned that a large portion of the 60 departments at FSU will have viable COA programs which offer students a meaningful choice in the means by which they can obtain their college degrees. In addition, through the continued development of exportable self-instructional materials, an open-university may be attained which may significantly reduce the time required for on-campus residence required for the degree.

3/31/75

REASONS FOR THE CURRICULUM OF ATTAINMENTS

John Harris, Associate Director
National Commission on United Methodist
Higher Education

The Curriculum of Attainments (COA) is designed to address four major needs in American higher education: (1) insure creditable standards of student mastery in mass higher education; (2) provide a system which directly credits students for their achievements without regard to time, place, or circumstance of learning, (3) provide a credit system that recognizes and rewards cost-effective strategies and techniques of instruction; (4) provice an educational structure which gives students and teachers greater flexibility of means and pace of instruction.

Creditable Standards. There is evidence that grades and honor designations are being inflated in American higher education. Normative grading practices and fixed-time/common-treatment curricular patterns interacting with mass, egalitarian education inevitably lead to lower performance standards or inflated grades. Only through selective admissions procedures can creditable standards of performance be maintained with fixed-time/common-treatment, normative grading education.

On the other hand, it may be possible to have open admissions and maintain creditable standards of performance at the same time by awarding credit and degrees only on the basis of performance assessed against predetermined criteria. This means that curricula will have to be time free assessment of achievement for certification separated from teaching, and strategies and procedures to assess faithfully the criterion achievements developed.

On the separation of assessment for certification from teaching--there is no suggestion that assessment is not a prime role of the faculty but that "others than the cooks should taste the stew."

The COA addresses the problem of relevant, creditable standards of mastery in several ways.

1. It separates teaching from assessment and certification. While a mentor is responsible for teaching the students, a jury is responsible for certifying student achievement and for awarding credit and degree.
2. It sets predetermined performance standards of mastery and ways to observe and judge them before students are instructed.
3. One member of the three-member jury is a practicing professional in the respective field, not a member of the faculty--a provision for relevance.

Open-Time-Free Education. Typical curricular systems have led to confusing means and ends of instruction. Residence, time in class, and common course requirements are intended to produce certain outcomes;

therefore, as means, they should not be rigid or restrictive as standards or ends must be. Nevertheless, in American education, we have become so dependent of "time" and "course" as education standards that we cannot be as responsible as we could or should be to needs for non-residential, independent study. Because of our dependence on requiring common instructional experiences under specified conditions of residence and time, we are not confident that we can recognize achievement directly when it has not been nurtured in the typical way.

The COA provides a system for certification purposes that takes no account of how and when something was learned.

Cost Effective Instruction. Because time and procedure of instruction are not just means but part of the criteria for credit, there is persistent resistance to changing them easily or quickly. As long as all students in a particular class or section must be instructionally "Processed" in the same way and time, there is no economical way to take advantage of their individual differences in terms of prior achievement and modes of learning. Rational instructional design and instructional technology can only be add-ons, teacher aids, or enrichments.

With 60 to 65 cents of each state tax dollar going to education and the growing demand from other state agencies for greater shares of the tax dollar, education will probably be fortunate to hold its own with its present slice of the pie. This being the case, educational technology stands little chance as an add-on.

What must education do to take maximum advantage of instructional technology?... Separate the credit-certification standards responsibility from the teaching-learning-facilitation function. Given this separation, schools and teachers would be encouraged to optimize on each student's achievements and gifts. Those that already meet a given standard could be credited for that achievement and devote learning time to what they don't know, can't do, and haven't achieved.

Teachers would search among a "free market" of instructional strategies, techniques, and resources for students needing instruction. Instructional practices would then be judged in terms of effectiveness, student liking, and efficiency. Given these criteria, it becomes possible and desirable to make decisions about trade-offs between level of mastery desired and instructional resources to be expended such as student and teacher effort and time as well as institutional expense.

None of this can happen without a valid and accepted system of recognizing and crediting achievement directly. Such a system is obviously dependent of having criterion-referenced performance assessment. While the use of such assessments provides incentives to individualize instruction, they will also help in the technical development of instructional practices themselves. Teacher-made tests are rarely constructed so as to give specific feedback on the effectiveness of a given instructional strategy or one technique versus another. Neither are current "professionally-developed" tests sensitive to instructional treatments. The reason

is they are usually composed of items selected to descriminate among inidiyuals so that the whole test will maximally spread individuals of a given group over a continuum. Given the purpose of normative tests, the ideal test item is one that 50% of the students answer correctly and 50% miss. This may be appropriate to indentify the most able on a given trait or factor. However, it is not particularly useful in establishing who has reached a predetermined, minimum competence. But more importantly for instructional technology, such tests, by emphasizing individual d'fferences, systematically de-emphasize group differences resulting from different instructional treatments.

In brief, the "no-significant-differences phenomenon" in instructional research may be as much due to the insenitivity of the tests as to the lack of any real differences in outcomes among instructional practices. With assessments that are more sensitive to instructional outcomes, instructional practices will be more amenable to change and improvement.

In the COA, the emphasis in assessment is on criterion performance measures rather than normative, vicarious measures. While every effort will be made to make assessments as objective as possible, the curriculum will not be limited to objectively assessable goals. Subjective judgements of performance will often be made with concern for their reliability.

Personalization of learning and Teaching. There continues to be interest in making education more "personal." Presently, students take many (+50) different courses for a bachelor's degree. Despite efforts to sequence and interrrelate courses, they continue to be relatively autonomous and discreet. The territorial imperative is manifest even at the section level. Excessive devotion to the course approach leaves teachers in something of an assembly-line mode--each one does his particular thing to or with the student but no one person is particularly responsible for the graduate, or even the graduate's overall competence in his major. Furthermore, undergraduates rarely indentify with a given teacher. To do so, they have to move against the system. This, of course, is not true of other approaches such as the British tutorial system.

The COA is designed to make a single teacher responsible for helping a small group (15) of students reach predetermined mastery goals. The teacher is not responsible for assessing and crediting their achievements. He is to optimize on the students' abilities and achievements, the instructional resources of his colleagues, institution, and community, and any technological instructional materials (especially for information delivery and skills development). It is hoped that the "teacher" in the COA will become a diagnostician of a student's achievements and failure, a tutor-mentor, and an agent to integrate learning. A teacher in this role will not be threatened but helped by the separation of certification and teaching, educational technology, and a course/time-free curriculum.

The COA is a pilot effort to provide a complete alternative curricular system that will do the following:

1. Maintain high standards of mastery in a mass, egalitarian system of higher education.

2. Provide a certification system that will encourage open education and the cost-effective use of educational technology.

3. Encourage a mentor-tutor role for the teacher with primary responsibility for optimizing the learning of each student.

Unlike the issues above, the mode of curriculum development in the COA is somewhat unique. The emphasis in development has been on the articulation of criteria of achievement and means to assess them. The credibility of the program rests mainly on the quality of its students' achievements and the flexibility it affords students and teachers in instructional processes.

The reason for this is the belief that instructional practices are best discovered, not prescribed. So the teacher and his students are free to develop the curriculum of learning experiences on an ad hoc, trial-and-error basis. This was not done to make the students be participants in the design of their education, though that is a desirable outcome. It was done because of the firm belief that like science in general, education is advanced most surely by "finding order in" rather than 'imposing order on."

IMPLEMENTING ATTAINMENT-BASED EDUCATION

FROM THE

INSTITUTIONAL PERSPECTIVE

Dr. Gary W. Peterson
COA Project coordinator
Florida State University

March, 1975

Before the actual planning and implementation of COA programs, certain conditions prevailed at Florida State University which permitted the establishment of COA programs. Conditions exter ll to the university will be treated followed by an exploration of circumstances within.

Perhaps the first significant historical antecendant took place in February of 1972 when the Senate of the Florida State Legislature unanimously passed a bill requiring the state universities in Florida to grant baccalaureate degrees after three years of academic work, unless there were accreditation conflicts. While the bill was defeated in the House of Representatives, it nevertheless signaled leaders of higher educational institutions in the State of Florida that elected officials were concerned about costs for maintaining postsecondary educational programs.

Yielding to pressure from the state legislature, the chancellor of the State University System of Florida directed all member universities to submit proposals to implement methods which may shorten the time normally required to obtain the baccalaureate. Proposals submitted by FSU were the use of CLEP, early admission, departmental examinations for credit and the Cirriculum of Attainments. While the intent of the COA was that degress should be awarded on the basis of attainments certified by faculty juries, many saw the COA as an opportunity for acceleration. Even though the COA program received only rhetorical support from the Chancellor and the Boatd of Regents, at least there were no deterants to the establishment of COA programs from the state level of policy formation.

Since funds to support the development of COA programs were not available from either the state level or from within FSU, financial assistance was sought from the federal level. The Fund for the Imrpovement of Postsecondary Education, with an expressed interest in competency-based education, awarded the Division of Instructional Research and Service funds to support a one-year planning project to select and plan three attainment-based degree programs with the highest prospect for success. Although developmental funds had to come from the national level, this nevertheless lent credibility to the project when departmental chairpersons were asked whether they would be interested in participating. On the basis of performance during the first year, funds were awarded for implementation of the three programs in the second year. The positive effect of having been awarded funds from the Fund for the Improvement of Postsecondary Education cannot be minimized.

Turning to conditions within FSU, four essential factors facilitated the development of the project: 1) an instructional development service; 2) an expressed interest in the COA project by departmental chairmen; 3) support from the central administration; and 4) cooperation from the registrar.

The COA project is conducted under the auspices of the Division of Instructional Research and Service. An operational assumption in the project is that there are many faculty members at FSU who are interested in curricular reform. However, because of the massiveness and immobility of a large university, individual efforts to foster such reform are by and large exercises in futility. An instructional development service provided coordination for the project as well as expertise in instructional design, assessment of learning, program evaluation and computerized information processing.

One of the tasks of the planning effort was to interview every department chairperson in the 60 departments at FSU. Twenty of the 60 department chairmen indicated they were willing to participate in the project. One can see that if funds were made available, many more COA programs could be developed beyond the eight existing programs.

In the initial stages of development, the COA received a major impetus from the Acting Vice-President for Academic Affairs, Dr. Daisy Flory who helped compose the original proposal for the Board of Regents. Furthermore, while individual members of the Faculty Steering Committee, The Graduate Policy Council and the Undergraduate Policy Council were concerned about maintaining educational standards, they offered only minimal resistance to the project. Because of the lack of rapport the president of the university had with a number of faculty constituencies, his support has not been openly solicited. He has, however, been very cooperative and complimentary whenever he has been asked to be a spokesman for the project. This proved to be auspicious since the COA project was ultimately viewed as emanating from faculty interest instead of a project promulgated by the central administration.

The change from conventional, time-based education to time-variable, attainment-based curriculum requires significant alterations in the kinds of information collected and processed to monitor student progress. The COA received indispensable cooperation from the Associate Registrar, Mr. Steve Hausert in designing an information processing system that could suit the needs of the COA program as well as the needs of the conventional system. More detailed information about this aspect of the program is presented on the brochures available from the project coordinator.

No innovative effort is ever immune from its share of resistances, trials and tribulations! I should now like to turn to some of the constraints imposed on the program so that if any of the audience wishes to embark on such

an endeavor, the following caveats may be remembered. Major constraints were 1) conservative faculty attitudes; 2) university regulations; 3) sufficient financial resources; and 4) a supply of interested and qualified faculty members to serve as mentors.

When faculty members have for years devoted their time to preparing fifty-minute lectures and pursuing their own research interests, the idea of now being asked to serve on juries or to provide individual tutorial instruction to COA students was received with less than relish. In discussions with faculty groups, often "what's-in-it-for-me" questions were posed. Furthermore, the prospect of having the contents of one's course converted to self-instructional learning packages was simply more than many wished to tolerate. Mr. Rubino's presentation discusses approaches he used to overcome faculty resistance in his department.

The inculcation of time-variable, attainment-based education into the conventional curriculum requires the gaining of a myriad of exceptions to normal operating rules and regulations. Among the more interesting procedures were early-registration to allow for continuous progress, the assigning credit hours to learning packages to earn FTE, the divising an attainment-based transcripts to accompany the conventional one, and the procurring underload and overload permits for COA students. Every departure from normal procedures required authorizations from appropriate provosts, deans and clerks. An "oh no!, what's-the-problem-now" was a familiar welcome. However, cooperation received for the project from upper-level administrators has been excellent but the securing of support was a time-consuming task.

The final and perhaps ultimate limitation imposed on the expansion and proliferation of COA programs is the paucity of interested and competent mentors. Mentoring requires skills not normally possessed by typical faculty members. Two programs withdrew from the COA project because an interested and qualified mentor could not be found. Both of these departments had over twenty-faculty members from which to draw. Ms. Haynes' presentation discusses the difficulties and rewards of functioning as a mentor.

Finally, in terms of resources required to develop a program, funds should be found to release one faculty member full-time for one calendar year to administer the planning of a 90-quarter hour degree program. The planning effort involves the articulation of generic attainments and specific competencies, the devising assessment strategies, the developing of learning packages (which at outset rely heavily on print and tutorial assistance from other faculty) and the recruiting of students. The planning mentor should also have a graduate assistant (20 hours/week), a 1/2-time clerk-typist and expense monies of up to $300. This amounts to a cost of $25,000 to $30,000 per program for planning and development. The COA programs at FSU were accomplished at considerably less cost, but costs not supported by external grant funds or FSU resources were donated in "in-kind" services by energetic and devoted planning mentors. The first year of implementation also requires about the same amount of additional financial resources as the planning year.

COA PROGRAM PLANNING AND IMPLEMENTATION AT THE DEPARTMENTAL LEVEL:

A MATTER OF COMMITMENT AND CONTRIBUTION.

Richard G. RuBino
Department of Urban and Regional Planning
Florida S ate University
28 March 1975

The role of the Division of Instructional Research and Services (DIRS) in initiating the experimental Curriculum of Attainments (COA) program at Florida State University has been amply discussed by Dr. Harris and Dr. Peterson. I now will discuss the activities in the trenches: i.e., the role employed by the departments of Urban and Regional Planning, Nursing, and the Marine Biology section of Biological Sciences as they sought to develop and implement their individual programs. Ms. Haynes, who follows me, will give you even further insight into these activities.

The people involved most in the implementation of the COA programs have experienced considerable satisfaction from participating in the program. On the other hand, I do not wish to imply that the first year of the program has been all "peaches and cream"; for, in reality, the introduction of this innovative experiment has, in its tougher moments, seemed quite exasperating. Just ask the students, some of whom are quick to voice their frustrations. Except for an isolated few, however, the students are staying with the program, which is perhaps the best measure of the program's early stages of development. From the beginning, we had recognized that there would be a lot of hard work, even anguish, and certainly a bushel basket full of problems in getting our COA programs underway. Some of the problems were anticipated, many others were not.

Among the major concerns which confronted us were:

1. In what ways could the support of the faculties of the departments be generated?

2. What could be done to make the planning stage of the COA program as productive as possible?

3. How could faculty support be sustained during the critical early period of implementation?

These, of course, are only three of many concerns, but for the sake of simplicity and time, my discussion will be restricted to these three broad concerns and some of the strategies employed to counter them.

The first of the just stated concerns was: In what ways could faculty support be generated:

One of the initial strategies in response to this concern was to identify key facilitators (i.e., the "movers and shakers") in each of the three departments selected to develop COA programs. As Dr. Peterson

mentioned, one of his early tasks was to locate key people in each department, for program development is dependent on people with enthusiasm and drive--people willing to commit themselves.

Shifting consideration to the remainder of the faculty, anyone familiar with higher education knows how easy it is to arouse a faculty to taking progressive action, to creating change! This trait just comes naturally to most academicians! Ah, if this were only so! Unfortunately, it is more of a truism that most faculty members are among the most reluctant of "creatures" when it comes to instituting change. Thus, it was important that the key facilitators in each department employ a strategy to move the faculties of the departments to action. As with any new venture dealing with change, specific causes had to be identified. These causes had to be focused on issues of particular significance to the faculties at that given point in time.

The relevance and reality of the COA concept had to be made obvious and visible. The promise of relevance and reality varied for each of the three departments. Common to the interest of all, however, was the opportunity to experiment.

As an example of the opportunity to experiment was the feeling of a number of members of the faculty of the Department of Urban and Regional Planning who saw the COA as a way to improve their program and to take a fresh and comprehensive look at the department's purpose for being. As one faculty member put it, "Even if the COA program were to fail to get off the ground, the effort should have a positive fall-out on the conventional program." The COA program, of course, is off and running, but the assumption has proven to be correct; many of the elements developed in the program have already provided the basis for positive change in the conventional program.

In the Department of Nursing, the major opportunities were seen as providing a means to work with students as individuals, improving the quality of a program which involved large numbers of students, and an opportunity for students to attain more responsibility in self-instruction. Over in the Biological Sciences program, there apparently was a feeling on the part of a few faculty members that the conventional approach to higher education was losing its relevance, and that, at least as far as the State of Florida was concerned, the "handwriting was on the wall" in regard to the traditional approach to higher education.

Once a cause was identified and made clearly visible, it was then essential that the proposed experimental program be consensually validated. A unilateral decision could have been ruinous to the need for continuous support and participation by faculty members. If a COA program is to be run concurrently with a conventional program, as is the case in the Department of Urban and Regional Planning, then a broad cadre of faculty are from time to time likely to be called upon to contribute to the program.

Speaking of the Department of Urban and Regional Planning, consensus was reached by the key individuals taking the proposal to the entire faculty for approval. In the Department of Nursing, the dean, chairman, other key persons, and the curriculum committee provided the consensus. In the Marine Biology program, the chairman, a key person, and an ad hoc department committee gave the COA program their sanction. As was borne out by the actions of these three departments, the degree of need for consensuality is dependent on the number of faculty members who will be needed to contribute to the program.

Once the experiment was agreed to by the faculty, the planning phase was initiated, which brings me to broad problem number two. What could be done to make the planning stage as productive as possible?

Naturally, one of the immediate needs was that strong internal support systems had to be institutionalized. An internal support system common to all three departments was that designed to provide for quality control. Because of the experimental nature of the COA program, quality control has been a tough subject with which to deal. A technique designed to aid in quality control was that an advisory planning body be created to ensure a fuller breadth of input than might be obtained from only one or two key individuals in a department. (Ms Haynes will discuss these advisory bodies in her presentation.)

During the current stage of implementation, quality control has continued to be a major interest. Unfortunately, the former broadly-based advisory bodies faded into oblivion somewhere between the end of the planning stage and the beginning of the implementation stage. Over the first few months of this academic year, maintenance of quality control in the Urban and Regional Planning program was the responsibility of a committee made up of three mentors, Dr. Peterson, and the chief staff assistant (a Ph.D. student). The department has since found it helpful to reinstitute student representation on the committee. Maintenance of quality control has also continued to be a major concern of the other two COA programs as they have moved through this first year of program implementation.

A different kind of strategy which had to be employed in the planning stage was that "truth in advertising" was essential. The students had to be made totally aware that the program was an experiment, and there might be severe growing pains during the first year of the program. The faculty had to be cautioned against looking for instant success. Success is not likely to be instantaneous. When developing a highly innovative program, the faculty and students should expect:

a. a full hard year of program planning;
b. a possibly frustrating second year for implementation, added program development, and some necessary backtracking;
c. a third year for polishing; and
d. a fourth year at which time a truly innovative program can be measured for success--or failure.

A not-to-be-overlooked principle of the planning stage is to bite off only what can be chewed. Many of the growing pains we are experiencing in the Urban and Regional Planning program are directly traceable to being somewhat glutonous in trying to do too much at one time. It is better to be inventively incremental than confoundingly comprehensive.

As part of the concern to establish strong internal program support systems, it was recognized that a strong staff was essential to the proper implementation of the COA programs. Two of the departments stuck to this precept by assigning all COA program responsibilities to one person, which has been shown to have its merits. One of the departments, because of a peculiar set of circumstances, split its mentoring responsibilities among three faculty members. This latter approach has made program control more difficult by increasing the need for coordination, but on the other hand, it has provided for the development of a broader base of experience; in the long run this may prove quite beneficial.

To this point, I have discussed mostly what has "been" happening; now let me briefly swing to a more current concern: How can departmental support be maintained during the critical early period of implementation?

There is considerable virtue in keeping the chores (e.g., tutoring, jury duty) divided up among as many people as possible. This not only keeps some people from being overworked, but it also provides another means of developing a broad base of program experience. If people external to the department are used as tutors or jurors then, as in the case of the faculty, it is helpful to find people who are willing to "commit" themselves to the program and then use those people who wish only to "contribute" time to the program to fill in the gaps and for specialized purposes. If you are unsure about the difference between commitment and contribution, let me illustrate my point this way:

> I heard a story the other day, quite fitting to this situation. A hen and a pig were walking down the road. They passed a restaurant with a sign in the window that read, "Ham and Eggs." When they saw this sign they stopped. The hen said, "Gee you know, that's wonderful. Ham and eggs in that restaurant; just think of the contribution we're making to society." The pig thought a minute and said, "Well, for you it may be a contribution, but for me it's a total commitment!

The message behind this humor is that if you are serious about initiating an innovative program, then you have got to find people (whether they be members of the faculty or external professionals) who are willing to commit, not just contribute.

In SUMMARY: I have discussed three of the general concerns which confronted the three departments in initiating, developing and implementing their innovative COA programs. In addition, I have tried to shed some light on a few of the strategies which were employed to attempt to resolve these concerns. For the most part, these strategies have been fairly successful, but the real answers to the effectiveness and efficiency of the COA concept are still unfolding.

COMPETENCIES AND THEIR ASSESSMENT

Pauline M. Haynes, Associate Professor
Curriculum of Attainments
School of Nursing
The Florida State University

Articulation of competencies is the most crucial task in instituting a competeacy based program. This task is also the most difficult. Individualized instruction and unique assessments are insignificant if the competencies identified are neither relevant nor essential.

One of the most frequently asked questions is what do you mean by a competency? Competency statements specify behaviors which are to be attained by the learner. A competency has three components. First, a knowledge area or skill. Secondly, an assessment task the student must perform and thirdly, a prescribed level of proficiency.

In each of the three experimental programs two levels of competencies are used. Thus, a roadmap of the final general outcomes of the educational program and the specific, sequential and simultaneous stops along the way is available for students and faculty. The generic competencies describe the program in terms of broad areas of knowledge and skill. Perhaps they are more properly termed generic goals or attainments. In Nursing there are twenty generic attainments, eighteen in Marine Biology, and twenty-eight in Urban and Regional Planning.

Related to each of these generic attainments, is a taxonomy of specific measurable competencies. In each of the three programs between one hundred and fifty to two hundred specific competencies are identified.

Let me give you an example for each program, first listing the broad generic attainment and then a related specific competency.

Marine Biology
- Generic attainment: Knows and applies basic principles of descriptive oceanography.
- Specific competency: Defines tide wave types: Semi-diurnal, diurnal, and mixed.

Nursing
- Generic attainment: Conducts a health assessment including a medical history to determine the client's level of wellness.
- Specific competency: Performs a newborn assessment, including Apgar scoring and evaluation of major body system.

Urban and Regional Planning
- Generic attainment: Demonstrates methods and techniques of implementing a planning program.
- Specific competency: Determines the strengths and weakness of a master plan for an urban renewal project.

Another important question is--what was the process by which the competencies were identified? The task of writing the competency statements fell to a faculty mentor and a planning jury composed of faculty

and advisory professionals from the work world. These planning groups met at least weekly for two quarters. Valuable consultation was provided by the Division of Instructional Reaearch and Services. Within the three programs there was a wide spectrum of support. In nursing, the Dean of the School and six faculty were very involved in the planning process, while in Marine Biology the mentor was virtually on his own. This was due primarily to his particular expertise and extensive background in his field.

During the third quarter of planning the major focus was on development of the initial learning packages, including instructional and assessment strategies, and addressing the numerous operational details. The mentors devoted approximately half time to this effort.

Because of the critical nature of the competencies, I will list some of the activites used by the School of Nursing in accomplishing this task. They are as follows: surveying the literature to determine trends in baccalaureate nursing programs and health care delivery, holding conferences with small groups of faculty with different clinical specialties and with advisory professionals representing health agencies where nursing students had clinical practice, examining recent course outlines, examinations and standardized tests, identifying observable tasks of practicing professional nurses in a variety of setting, including job descriptions for beginning level practice, and finally, as competencies were stated, obtaining feedback from the total faculty.

Before proceeding to the next area, may I caution you on two points. First, the competency statements will never seem quite finished or complete. Don't allow this feeling to block progress. Secondly, in an experimental program such as the COA there is a tendency for "overkill." Perhaps this is out of fear of failure and to counter the critics. However, it is unfair to students to demand far more of them than the conventional curriculum. The curriculum cannot include everything, and as one of our consultants frequently admonished, "nice to know" must be separated from "need to know." Each of our programs has received some student criticism already for expecting too much work for too little academic credit.

Now let us turn to assessment--the inseparable other side of the coin. How is the student's attainment of competencies assessed?

As the student progresses through the learning packages, the mentor, tutors and student engage in Formative evaluation of specific competencies. Assessment strategies include paper and pencil tests, oral examinations and discussions, projects, problem solving activities, demonstration of skills in laboratory and real settings and the use of audio and video tapes.

Evaluation of the generic competencies is addressed in a unique way. That is, a jury composed of at least two faculty and a practicing professional, assess student attainment of generic competencies. Non-traditional methods are stressed in this summative evaluation, also. Methods employed thus far include oral and written comprehensive examinations, portfolios, simulated and real program solving situtations

requiring multiple knowledge and skill.

Although we have not yet had extensive experiences with juries, some problems have arisen. These problems center around the time commitment necessary for adequate preparation by the jury and for actual jury duty with students. Other problems include unrealistic expectations of some jurors, disagreements among jurors over standards and the tendency to focus on one's particular area of knowledge rather than the competency.

As you might expect, the students experienced four plus anxiety at initial jury encounters! Success has served to decrease the level of anxiety and to provide the student with a sense of accomplishment. In spite of the unorthodox evaluation procedures, Nursing has lost no students and the other programs have lost only a few.

Another question which arises is what about grades? Currently Nursing the Urban and Regional Planning are designating attainment of competencies as being Satisfactory or as Incomplete. In Marine Biology a satisfactory performance is equivalent to a grade of B. An A may be awarded by the jury upon unanmious vote that a student has gone significantly beyond the requirements of the competency. Students vascilate in their opinions concerning grading. They are aware that an extensive portfolio is being compiled and will perhaps be more meaningful than a list of grades to future employers and to graduate programs.

The student earns credit by completing the learning packages; not by demonstration of attainment before a jury. The juries provide valuable feedback for both student and mentor and for the program as a whole. The exit juries will, however, have the responsibility and authority to certify the student's attainment of the generic competencies before he graduates.

In summary, the major faculty tasks in initiating a competency based program are identifying the competencies and developing assessment strategies. Then I feel that the real excitement begins when the students enter the scene!

THOUGHTS ON MENTORING WITH TONGUE IN CHEEK

Pauline M. Haynes, Associate Professor
Curriculum of Attainments
School of Nursing
The Florida State University

It is impossible for me to provide a scientific analysis of the mentor role, but I can give you my impressions. The mentor is the key person responsible for the success or failure of a competency based program such as the COA. Therefore, he should not be selected without forethought. The mentor should be a generalist instead of a highly trained specialist. He should not be the least experienced person on the faculty, but should in fact be one of the most qualified. His background should be broad, and his position secure, so that he has nothing to lose if the program fails. The mentor should also have nothing to prove, for his reputation as a teacher is well established. He should have open lines of communication to fellow faculty members and to practicing professionals in his field. He should possess knowledge of the total educational program, as well as the capabilities and philosophies of his colleagues so that he will choose tutors wisely and have their full cooperation. The mentor should be on more than speaking terms with higher administration so that the resources will be available without frustration. He should be both a curriculum and an evaluation expert. His creative well must be deep for devising new instructional materials. Among his key traits should be sensitivity and flexibility. "Whatever teaches" should be allowed and encouraged. He must use all his energies in helping the student to truly maximize opportunities for learning.

The mentor must have concern for students as total individuals, relate easily to them, and like them. He must have a basic trust in the student and believe him capable of self directed study and having unlimited potential. He must be able to capitalize on each student's past experience and education and to encourage moving according to the student's capabilities, wants and needs. He must be able to follow the sequence of a number of students and to listen with concern to minute details of personal matters, as well as to time and organization problems, learning activities, career decisions, doubts, frustrations, discovery and excitements. He should be willing to be available and exposed to students hour by hour, day after day. He should be articulate and able to share himeself--his knowledge and experience, without the crutch of lecture notes and a podium. He must tolerate having treasured ideas challenged and willingly involve himself in each painful step of the learning process.

The mentor must also be a role model demonstrating the attitudes, maturity and commitment of a professional person. He must find time to deal with the kaleidoscope of student ideas, interests and social concerns. He must be able to come close to different attitudes and values and not lose too much sleep over them. His morale must stay reasonably high through minirevolts and petition signings. Finally, he must be able to

sit in the background and watch the student "put it all together" with pride that he did it all by himself.

When you find this super teacher-mentor, you may think that he won't be interested, But I think he will. he has probably been dissatisfied with the constrains ofthe system for at least a decade. And when he accepts the mentor role--dontl help burn him out with endless meetings to attend, lectures to answer, persons to advise, and parades of interested and illustrious visitors.

But do provide him with consultation, a ready ear for his problems, encouragement, and occasional recognition and praise. And, finally, administrators, give him time for personal study, renewal and research before he begins again with the next group of neophytes. By the way--a sense of humor is an essential prerequisite for mentoring!

Instituting Competency-Based Degree Programs

in a

Large Public University

by

David Riesman

March 31, 1975

Until last September when I spent eight days in Tallahassee at the invitation of Gary Peterson and his colleagues during the very opening days of the University's academic year, I had only fleetingly encountered the jargon word "competency" in looking at other sorts of educational reform. Thus, Minnesota Metropolitan State College combines the concept of competency with efforts to provide appropriate academic upper-division credit for "experiential learning" to a non-residential group of mostly adult students, through the use of home-office mentors and adjunct faculty from the Twin Cities (much as in the case of Empire State College, which operates on a far larger scale). My other exposure had been to a small private engineering school, Worcester Polytechnic Institute, which in seeking to transform itself from an old-fashioned "tech" school in order to turn out "humane technologists," had gone over to a program based on competence rather than on credits. In both instances, I had expressed my usual caveat to educational reformers: namely, to "think small," to realize the full magnitude of what they were undertaking, including the long-run costs in faculty energy and possible exhaustion, and the need to concentrate efforts correspondingly on educational objectives without mixing these up with social and racial redemption, reforms in governance, and all the other efforts in vogue with reformers in the last decade or so. (I would of course--this is implicit in what I have said--favor educational efforts devoted to work with the previously disadvantaged and excluded in higher education, provided that energies were concentrated on this sufficiently difficult task rather than dissipated in so many different and competing efforts at reform that if one either fails or succeeds, one would never know why.) The belief that all good things are compatible has in the past been an American illusion. And I recognize that correspondingly, even though one may think small, one may feel one has to talk big to mobilize the human energies and to secure the outside support necessary for any major change, even though it may turn out that the big talk in the end is self-defeating when it claims too much, too soon, and too inexpensively.

When I was asked by Professor Gerald Grant to take part in a project whose members have come from a variety of disciplines, including the humanities and psychiatry, to examine a number of competence-based programs, I chose among the available locales for my own inquiry Florida State University. What attracted me was that those in charge had already been

"thinking small": they were starting with three programs; they were avoiding the jargon term, "competency," in favor of what I think is a better term, "Curriculum of Attainments"; and it seemed to be likely that the fact that they were in the South--perhaps the only Southern part of Florida--might provide a more sober base of both students and faculty on whom to draw than in some of the more swinging centers of the Northeast or California. These papers illustrate that, despite the start-up difficulties of the three programs represented here and those coming along for the following year, they have been thinking at FSU in a very serious way about major questions only a few of which I can select for underlining here.

John Harris and Gary Peterson both emphasize dissatisfaction with what is seen by reformers as the time-bound (and often time-serving), faculty-centered traditional forms of higher education. This dissatisfaction with what is seen as stuffily traditional has been carried into many institutions by faculty who were students and graduate students in the late 1960's, but who have not necessarily in their new institutions learned the very difficult task of being able to develop the building blocks of competence in particular fields, and without possessing the complicated skills a mentor needs to work with students in less time-structured situations, knowing when to use and when to avoid the programmed packages of educational technology, and able to muster external resources for assessment of the students' attainments. Gary Peterson shares the common view that large systems tend to resist change. But it is the larger institutions which have more quickly subdivided their biology departments, added computer science, and often urban, ethnic, and women's studies. Indeed, in his essay, "The Management of Decline," Kenneth Boulding observes that their size allows larger systems more diverse ways of responding to retrenchment in a flexible rather than in a panicky manner, although he also maintains, I think correctly, that we have not trained many Americans in the management of decline, but only in the relatively easy management of growth illustrated for me by the derogation of the National Institute of Education when it did not readily win budget increases which would seem to me to have been in an epoch aiming at zero population growth to be a point of pride). To be sure, some small colleges have been able to make extremely rapid and apparently near-total changes, not, I think, because they were small, but because they could count on institutional loyalty from old-time devotees. Those who began the transformation of Worcester Polytechnic Institute, for example, were for the most part alumni who had been there a long time, and who cared about institutional survival. Similarly, Alverno College, which aims to go over totally to CBE, has been able to count on a community of religious sisters who, though they may not have consensus as to their educational goals, have been willing to work desperately long hours for institutional renovation and survival under the occasionally inspired leadership of members of the religious community. (The same is true at other innovative Catholic women's colleges such as Lone Mountain, Immaculate Heart, Loretto Heights, or Manhattanville.) Bob Knott, Dean of Instruction at Mars Hill College, a small Southern Baptist school near Asheville,

describes in the current Journal of HIgher Education some of the criteria one might apply to develop a competence-based program in liberal education; that is, what Mars Hill faculty would consider the human outcome of a genuinely liberating education in terms of skills, values, citizenship--an effort of such immensity, even grandeur, that it would be hard to conceive of its being attempted at a large and heterogeneous university, public or private.

The small private colleges, now so likely to disappear under increasing budgetary pressures, have often served as academic experiment stations for land-grant and other major state universities. However, "thinking small" of course does not mean that efforts to influence American higher education are best accomplished by the example of small colleges which are mostly private; one needs this, but one also needs experiments at major state universities such as Florida State.

If one considers these papers as a whole, it would appear that the representatives from FSU on the panel recognize that their Curriculum of Attainments is what the British would call a "hard" rather than a "soft" option. What is "hard" is the idea of competence itself: what one can do; as Pauline Haynes says in her paper, this demands attaining a 100 per cent level of performance. What is also "hard," as I mentioned to all three groups on my FSU visit, will be the discovery that these are not necessarily going to be time-shortened programs, since the mentors, in being forced to think about what competence really is in their respective fields, are likely to raise the level of expectation far beyond the minimum attainment possible in ordinary course work. Consider, for example, the statement in Pauline Haynes' paper from Urban and Regional Planning: "Determines the strength and weakness of a master plan for an urban renewal project:". That sounds to me like asking for the qualities of an outstanding IBM executive who was also Socrates! To call it a specific competency is to disguise the elements of experience and wisdom involved in attaining it. It is of a different order than the other competencies she mentions, which can be done in some cases with a lower level of ambiguity, for example to determine wave types in the marine biology program, or to make a physical assessment of a newborn infant in the nursing program, where one is not seeking an extraordinarily gifted diagnostician, but someone who can catch the major symptoms or who would know when one might need a specialist.

Or let me take a still more readily manageable example. Suppose one wanted to know how well a student at FSU could speak colloquial Spanish dialects, one could readily gather in Tallahassee a group of Spanish-speakers, ranging from well-educated Cubans to migrant Mexican laborers, and then observe how the student manages with each of these cadres.

But the Curriculum of Attainments programs at FSU now in process are more demanding than this last example, dramatically so in the next round, which includes, among others, Religion, and English. All this gives point to Richard Rubino's reference to the "high degree of selectivity" needed in the

...ree ongoing programs; I also agree with him that a workshop atmosphere, or what he calls "togetherness," is more likely to be created if one is selective--and small. In my own judgment, complicated and experimental programs such as CBE should at least at the outset be confined to honors students--and also honors faculty. Yet John Harris makes the correct observation that one source of pressure for CBE comes about through Open Admissions rather than selective admissions, leading to the desire in the presence of the current grade inflation, to have more severe points of exit when one has easier points of entry. What I most fear is that CBE programs will be seem as a way of helping the more disadvantaged students. It is obvious that there are students from disadvantaged backgrounds who have overcome their handicaps and are capable of outstanding honors work at any university in the country. But it has been my observation that in general experimental programs, which often attract the affluent and sophisticated who, at least ideologically, reject structure and tradition, are rarely helpful or remedial for students from very different backgrounds who are the least likely to be able to afford the price of pedagogic experimentation. This is not a judgment on the great diversity of programs which call themselves competence-based, some of which are more structured than the traditional programs and require the seriousness and clarity of outcome that John Harris would want. But other programs which also use the CBE terminology combine it with college credit for life experience, and may dilute the value of the degree--some intend to do exactly that--again for those who most need for their advancement an undiluted credential.

What we do not know and what we find hard to measure are the affective qualities of students who are best served by newly designed and often less structured educational programs. Test scores may provide a kind of rough-hewn floor. But beyond that, one wants to know about willingness to endure frustration and changes of program, and willingness to submit one's performances to a jury of assessors not entirely intramural and hence not entirely subject to conning or manipulation, and to the faculty's own need, if not for love, then for classroom bodies to justify FTE support. Moreover, it seems to me we know little about what sorts of students can benefit most from residential education. The affluent student from a college-educated family has often been away from home and peer group through such opportunities as the Experiment for International Living. I grant that the values of residential socialization are hard to measure, notably so when one moves away from such small, relatively isolated communities, sharing something of a common faith, as at Mars Hill College. But I am reminded of the fact that several decades ago, women students at the University of Kansas asked for instruction in how to set a table and how to dress. (They were looked down on for this by the more sophisticated liberal arts faculty and students, but it seemed to me a valid expectation. Maybe college is not the optimal place to learn such things, but it is surely one place.)

Florida State University, an extraordinary success story in its development since the Second World War, has about 20,000 students, a great many of them scattered all over Tallahassee. The three programs represented here provide small enclaves or volunteers on the part of both

students and faculty. If the programs turn out to be greatly superior, not only in terms of closer student-mentor relations, but in terms of occupational placement, there will be the usual charges of "elitism," a word to scare people with except on the athletic field and perhaps in the art studio.

Thus there is much to be said for making the hurdles to get into the FSU program steep, to assuage misgivings because not many students excluded from such arduous programs will be jealous.

If the programs are seen by liberal arts faculty at FSU as arduous, that may still not avoid the snobbery that Al Collier met from others in the Biology Department--a snobbery characteristic of academic invidiousness, Liberal arts faculty have a happy belief that they are not teaching a trade, but rather, "knowledge for its own sake." I know that my colleagues at Harvard who give Ph.D's in history believe that a student who turns out to do marvelously in investment banking in Lebanon or Osaka because the student's work in another culture was creative for such applied work, believe that such students have chosen an inferior career, and alas, the students themselves believe that they may not be appropriate proteges because they are not putting their doctorates to use as Professors of History in major universities. Similarly, I would support that the biologists at FSU would feel cranky about the premeds they have to service to go on to get more money as applied technologists than research scientists generally make. All this may be intensified at FSU because the Administration itself comes out of the School of Education, which despite its distinction is looked down on there as almost everywhere as a trade school. Undoubtedly, it is easier to teach some subjects in a liberating way than others, because of the nature of the subject or the traditions developed around it. Nevertheless, I would insist that what matters is how something is learned and taught: the modes of inquiry and performance can be liberating, even in non-esteemed subject matters.

In the nursing program, the faculty have thought about what the nurse of tomorrow would need to know as nursing changes its nature; in a sense, this is part of the general effort to raise the level of the nursing profession along the lines of the medical model. One result of such a program if it works well might be to send students into a world of work not yet ready to receive them, so that they end up as persons who can only be happy being professors of nursing!

I have made these references to professional curricula by design, because they suggest models where for a long time we already have had curricula of attainments, though not so labeled, and we can see both their expense and their value in these more traditional settings. For example, I was reminded, reading these papers, that my father, when he taught medicine for many years at the University of Pennsylvania, refused to give written examinations, but took his students to the bedside and observed them examine and diagnose a patient and prescribe appropriate treatment. Furthermore, he was not satisfied with that performance in a single hospital setting, but would observe them vis-a-vis private patients and also at the great

Philadelphia General Hospital as well. Thus there was not a single trial, but many trials. Even then, medical education was costly. So is psychoanalytic supervision, which is, in a sense competence-based, although it would be hard to find a jury of experimental psychologists who could agree on outcomes and what psychoanalytic competence is. As I have already suggested, many PhD programs are in effect competence-based. Often the thesis must be read or the student examined, or both, by someone outside the department.

Indeed, as Pauline Haynes points out, it is an advantage for students to be forced to perform before an external jury.

For some kinds of competence, where there is clear consensus, as in mathematics or the more elementary aspects of the natural sciences, bits of competence may be fairly readily assessed, although I would myself want to know how long it took the student to learn these, as well as the end outcome. Speed of cramming and indeed forgetting may be important for some kinds of future work; diligence and slow learning, repeated trials, and remembering, may be important for other kinds of work. What I think is harmful to students themselves and to the society is the increasingly sanitized transcript which erases evidence of failures or trials, while giving only the finished record of successes. John Harris may be too hopeful in believing that CBE will in the end turn out to be an improvement in distinguishing between genuine competence and time served and grades gained or regained.

This leads to the question about the training of the external assessors. They need to know as much as possible about what to expect of students, and this in turn requires them to know something about what kinds of faculty the students have been exposed to. I myself had the experience of being asked along with a number of other academicians in major university colleges to read the senior essays done at a small private liberal arts college in New England and to grade them as I would at my own institution. Of course, my own institution has suffered such "grade inflation" that I had to use my own standard and not that of Harvard, but what was interesting was that each one of us as external examiners graded just slightly up, giving slightly higher grades than would have been given at the college in question. We did so not because we thought the students at the college were necessarily less capable than our own, but because we knew that the faculty was small in number, and we felt we could not ask the students to transcend the faculty's own necessarily limited levels of competence. Consider the contrast with Swarthmore, where honors students have only external examiners, and their teachers are in the admirable position of being coaches. Some external examiners have been so dazzled by Swarthmore's reputation that they expect too much and penalize Swarthmore seniors for not being quite ready for doctoral orals at Princeton.

This reference to external examiners is one way of re-emphasizing the point with which I began about thinking small. The FSU team is aware of the difficulty of finding, selecting, and in turn assessing the external assessors. They recognize the time and cost involved for the faculty. Furthermore, I have seen at Worcester Polytechnic Institute the demoralizing and perhaps politically explosive consequences that can occur if after four years a student who has seemingly done well fails the competence assessments; then faculty are likely to make very great efforts, if the student seems worthwhile, rather than someone who has merely slipped by thus far, to help the student prepare for another round of oral judgments in the face of the student's impaired self-confidence. This is another long-run cost of all such work, and in a public institution it is a cost that may not be reimbursed through FTE formulae, which were designed for more traditional forms of instruction. Indeed, I think outside support such as is provided by the Fund for the Improvement of Post-Secondary Education is essential if programs of this sort are to have a real chance to prove themselves at major public institutions.

I formed this judgment even before FSU experienced last fall a drastic shrinkage of resources in the state system, something which seems to be occurring everywhere except Illinois and Texas. I hope that the promising and self-critical FSU program will not suffer from the tacit coalition now under way in America between educational reformers who immodestly claim to do more for less and the budget-cutters, who see in such programs a formula for saving time and hence money by, in John Harris' terms, focusing on product rather than process. What I fear above all is a short-circuit that can occur when legislators are persuaded by innovators--some among their own number as well as outside--that the students who need the most can be fobbed off with the least expensive or allegedly least expensive forms of education, including, of course, the great expense of the student's own time and income foregone.

Legislators and others need to recognize, as I hope the papers presented here make clear, how much faculty development is required before faculty members can take part in such an enterprise, for most of us are at least as anarchic as our students, generally focused on our own processes and trained and promoted on the basis of our own products. Occasions such as this help risk-taking faculty to get a chance to share failures as well as successes, misgiving as well as hopes. The candor of the FSU faculty is in this as in other respects an example to all of us.

COA Evaluation Activities
1974-1975

Constance Ferguist, Evaluator

Mary . Peterson, Project Coordinator

The emphasis for the evaluation component of the Curriculum of Attainments Project for 1974-1975 was on formative evaluation. Evaluation information directed toward revising and improving the project was collected and provided to COA personnel. The initial concerns were with ensuring adequate program definition and effective implementation. The following activities were planned for the fiscal year:

Program Definition

1. Analysis of stated components for inconsistencies and omissions. Scheduled activities include meetings at the project and program levels to determine the inputs, processes, and outputs anticipated for the COA. The evaluator will arrange the meetings and provide a framework for identifying inconsistencies and/or omissions.

2. Derive statements of time and cost estimates for each stated project or program component.

3. Analysis of the learning packages for each program for inconsistencies among objectives, learning activities, and assessment devices. Student reports, mentor reports, and evaluator observations will be used.

Implementation of the Defined Program

1. Development of forms for recording activities and time requirements for mentoring and the achievement of attainments.

2. Development of formulae for translating time into cost when possible.

3. Analysis of discrepancies between observed implementation procedures and the stated program components. Bi-weekly observations by the evaluator and/or mentors will be recorded and reported to COA personnel and the Project Advisory Committee.

4. Determination of problems in implementing the stated program components. Problem and benefit surveys will be conducted during each academic quarter.

Several forms used in the evaluation process are attached. The program goals and their operational indicators are listed below:

Goal 1. Establishing mastery standards required for the degree.

Operational indicators:

A. At least three persons from the program faculty or related profession will be appointed to serve as COA jury members.
B. Juries will meet at least once a quarter.
   1. number of generic competencies tabulated in each program.
   2. number of specific competencies tabulated in each program.

Goal 2. Creation of an open university that is time-free and location-free.

Operational indicators:

A. Open registration procedures are initiated so that students may register any time during the academic year.
B. An attainment-based transcript will be developed that describes the competencies of the student and assessment strategies.
C. Learning packages will be developed that are both self-instructional and exportable.
D. For each program area, a special COA facility will be designated to provide a learning environment conducive to self-paced study.
E. The student populations in each program area will include non-traditional students.

Goal 3. Cost-effective use of educational personnel and technology.

Operational indicator: COA programs will operate at or above the productivity level of the comparable conventional programs, i.e., the rates of student credit hrs./FTE will be equivalent or higher than conventional programs.

Goal 4. Demonstrate mentor-student relationship.

Operational indicators:

A. The students in COA programs will view their relationship with mentors as a major benefit of the COA program.
B. The mentors will spend at least 25% of their time in individual conferences with students.

Goal 5. Establish a more direct relationship between curriculum and the world of work.

Operational indicator: The COA programs will include practicing professionals in the articulation of attainments and in the juries.

Coal 6. Examine a strategy for instituting attainment-based education in colleges and universities.

Operational indicator: COA programs will be established in at least five more program areas at FSU by Fall, 1975.

APPENDICES

Appendix I

Curriculum of Attainments

Student Learning Profile

Name_____ Date Entered LP_____

Learning Package Number_____ Date Completed LP_____

Competency Number	Instruction		Evaluation			
	Learning Activity, Resource, or Reference	Tutor's Name	Time	Performance Measure	Score	Decision

Appendix II

Curriculum of Attainments

Learning Package Evaluation Questionnaire

Learning Package Number _____

	Strongly Disagree				Strongly Agree
1. The subcompetencies in this learning package seemed directly related to the terminal objective.	1	2	3	4	5
2. The learning activities and resources were effective in helping me learn the subcompetencies.	1	2	3	4	5
3. The tests/evaluations over the sub-competencies fairly reflected my mastery.	1	2	3	4	5
4. I felt the learning gained from this learning package was worth the time expended.	1	2	3	4	5
5. I enjoyed working through this learning package.	1	2	3	4	5

6 The following activities and resources were most helpful to me:

_____

_____

_____

7. The following activities and resources were least helpful to me:

_____

_____

_____

8. Comments and suggestions for revision:

(Please use back for additional comments)

Appendix III

Curriculum of Attainments

Mentor Activity Chart

Name_____ Program (Circle one) Biology Nursing UPL

Date	Record the number of hours spent in the following COA activities					Check which student-related activities occurred for each student named							Estimate non-COA activity
	Administration		Advising		Other (please specify)	Evaluated student progress on previous LP	Referred to tutor	Discussed learning activity	Suggested formal evaluation over LP	Advised on personal life	Chatted for rapport	Other (Please specify)	
	Attended meeting	Clerical Activities	(hours)	(Student's name)									

Appendix IV

Mr. Mrs. Miss — COA Attainment-based Transcript

Name: Last — First — Middle — Social Security No.

1229 Lincoys Dr. Birmingham, AL
Home Address

April 4, 1952 — Date of Birth
September 16, 1974 — Date of Admission
Date Withdrew

URBAN AND REGIONAL PLANNING
Academic Division

THE FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306

This Transcript is not Official Unless it Bears the Seal of The Florida State University

CURRICULUM OF ATTAINMENTS

CODE
C = COMPETENCY
M = MODULE
FC= Formal Course

COMPETENCY ASSESSMENT PROCEDURE (asmnt):
1 = demonstration
2 = written essay
3 = objective test
4 = oral exam
5 = portfolio
6 = anecdotal records
7 = other

Grading System
A-4 q. pts. Excellent
B-3 q. pts. Good
C-2 q. pts. Average
D-1 q. pts. Barely Passing
F-0 q. pts. Failed
I-0 q. pts. Incomplete
P 0 q. pts. Passed
S 0 q. pts. Satisfactory
U-0 q. pts. Unsatisfactory
W-0 q. pts. Withdrew Passing
WD-0 q. pts. Withdrew with Dean's Permission

CLASSIFICATION
10-Freshman
20-Sophomore
30-Junior
40-Senior
51-Beginning Graduate
52-Advanced Graduate
61-Post High School Special
62-Post Baccalaureate Special

CODE	Course Prefix	Course Number	DESCRIPTION OF COMPETENCY AND MODULES	Quarter Hours: Date Begun	Date Passed	Hrs.	Grd.	asmnt	MENTOR OR JURY MEMBERS
			FALL QUARTER 1974						
M	UPL	A592	DEV OF PLANNING THEO	9/23	10/17	2	S	3	E. E. MCCLURE
M	UPL	B592	COMP PLANNING PROCESS	9/30	11/7	1	S	2	E. E. MCCLURE
M	UPL	C592	THE PLAN AS A PLAN T	10/7	11/14	1	S	2	E. E. MCCLURE
C			PLANNING THEORY		11/14		S	2,3	E. E. MCCLURE, J. FRANK, R. SMITH, R. OLLRY
M	UPL	D592	URBAN & REG SYSTEMS	10/14	2/16	3	S	3	E. E. MCCLURE
M	UPL	E592	PLANNING & URBAN FOR	10/21	12/9	1	S	3	E. E. MCCLURE
M	UPL	F592	PLAN & LOCATION THEO	10/28	2/16	2	S	3	E. E. MCCLURE
M	UPL	G592	PLAN & HUMAN ECOLOGY	11/4	12/9	2	S	3	E. E. MCCLURE
C			THEORY OF BEHAVIOR OF URBAN & REGIONAL SYSTEMS		2/16		S	3	E. E. MCCLURE, GIBSON, FREDLAND, PEARMAN, R. SMITH
M	UPL	H592	GENERAL SYSTEMS THEO	11/16	12/15	1	S	2	E. E. MCCLURE
M	UPL	I592	PROB SOLV IN GEN SYS	2/27	3/13	2	S	2	E. E. MCCLURE
C			GENERAL SYSTEMS THEORY		3/13		S	2	E. E. MCCLURE, H. BALKUS, I. BRANDON
			WINTER QUARTER 1975						
* M	UPL	J592	INFORMATION SYSTEMS AND THE PLANNING PROCESS	1/6	3/5	1	S	2	E. E. MCCLURE
M	UPL	K592	PROBLEM SOLVING	2/11	3/13	2	S	2	E. E. MCCLURE
C			INFORMATION SYSTEMS AND THE PLANNING PROCESS		3/13		S	2,4	E. E. MCCLURE, BRANTINGHAM, PEARMAN
M	UPL	0592	STATISTICAL TECHNIQUES FOR PLANNING	1/6	1/6	4	S	3	E. E. MCCLURE
C			STATISTICAL TECHNIQUES FOR PLANNING		1/6		S	3	E. E. MCCLURE BRANDON
M	UPL	A593	PLANNING AND POLICY ANALYSIS			1	I	2,4	E. E. MCCLURE
M	UPL	B593	POLICY DEVELOPMENT			3	I	2,4	E. E. MCCLURE

* Registered for this course in the Fall Quarter 74

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